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Adsorption h at pump

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Abstract

An adsorption heat pump includes a working fluid, an adsorption-desorption unit (1), and an evaporation-condensation unit (2,3) connected with the adsorption-desorption unit (1). The adsorption-desorption unit (1) adsorbs and desorbs vapor resulting from the working fluid, and includes an adsorbent being a porous substance. The porous substance has pores, and exhibits a pore diameter distribution curve having a maximum peak falling in a pore diameter range of from 1 to 10 nm. The pores in the diameter range of +/- 40% of pore diameter at the maximum peak have pore volume not less than 60% of a whole volume of the porous substance. The evaporation-condensation unit (2,3) evaporates and condenses the working fluid. The adsorption heat pump can be operated by a low-temperature heat source, and can exhibit a large pumping temperature difference regardless of its small size.

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